

## Federal Aviation Administration, DOT

## § 25.1513

(e) Any novel or unique design or operational characteristics of the aircraft shall be evaluated to determine if any dedicated parameters must be recorded on flight recorders in addition to or in place of existing requirements.

[Amdt. 25-8, 31 FR 127, Jan. 6, 1966, as amended by Amdt. 25-25, 35 FR 13192, Aug. 19, 1970; Amdt. 25-37, 40 FR 2577, Jan. 14, 1975; Amdt. 25-41, 42 FR 36971, July 18, 1977; Amdt. 25-65, 53 FR 26144, July 11, 1988]

### § 25.1461 Equipment containing high energy rotors.

(a) Equipment containing high energy rotors must meet paragraph (b), (c), or (d) of this section.

(b) High energy rotors contained in equipment must be able to withstand damage caused by malfunctions, vibration, abnormal speeds, and abnormal temperatures. In addition—

(1) Auxiliary rotor cases must be able to contain damage caused by the failure of high energy rotor blades; and

(2) Equipment control devices, systems, and instrumentation must reasonably ensure that no operating limitations affecting the integrity of high energy rotors will be exceeded in service.

(c) It must be shown by test that equipment containing high energy rotors can contain any failure of a high energy rotor that occurs at the highest speed obtainable with the normal speed control devices inoperative.

(d) Equipment containing high energy rotors must be located where rotor failure will neither endanger the occupants nor adversely affect continued safe flight.

[Amdt. 25-41, 42 FR 36971, July 18, 1977]

## Subpart G—Operating Limitations and Information

### § 25.1501 General.

(a) Each operating limitation specified in §§ 25.1503 through 25.1533 and other limitations and information necessary for safe operation must be established.

(b) The operating limitations and other information necessary for safe operation must be made available to

the crewmembers as prescribed in §§ 25.1541 through 25.1587.

[Amdt. 25-42, 43 FR 2323, Jan. 16, 1978]

### OPERATING LIMITATIONS

#### § 25.1503 Airspeed limitations: general.

When airspeed limitations are a function of weight, weight distribution, altitude, or Mach number, limitations corresponding to each critical combination of these factors must be established.

#### § 25.1505 Maximum operating limit speed.

The maximum operating limit speed ( $V_{MO}/M_{MO}$  airspeed or Mach Number, whichever is critical at a particular altitude) is a speed that may not be deliberately exceeded in any regime of flight (climb, cruise, or descent), unless a higher speed is authorized for flight test or pilot training operations.  $V_{MO}/M_{MO}$  must be established so that it is not greater than the design cruising speed  $V_C$  and so that it is sufficiently below  $V_D/M_D$  or  $V_{DF}/M_{DF}$ , to make it highly improbable that the latter speeds will be inadvertently exceeded in operations. The speed margin between  $V_{MO}/M_{MO}$  and  $V_D/M_D$  or  $V_{DF}/M_{DF}$  may not be less than that determined under § 25.335(b) or found necessary during the flight tests conducted under § 25.253.

[Amdt. 25-23, 35 FR 5680, Apr. 8, 1970]

#### § 25.1507 Maneuvering speed.

The maneuvering speed must be established so that it does not exceed the design maneuvering speed  $V_A$  determined under § 25.335(c).

#### § 25.1511 Flap extended speed.

The established flap extended speed  $V_{FE}$  must be established so that it does not exceed the design flap speed  $V_F$  chosen under §§ 25.335(e) and 25.345, for the corresponding flap positions and engine powers.

#### § 25.1513 Minimum control speed.

The minimum control speed  $V_{MC}$  determined under § 25.149 must be established as an operating limitation.